PP-32
ET 92-28

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In re Application of:	
MOTOROLA SATELLITE COMMUNICATIONS, INC.	File Nos. 9-DSS-P-91(87) CSS-91-010
For Authority to Construct a Low Earth Orbit Satellite System in the 1610-1626.5 MHz Band.	

REQUEST FOR PIONEER'S PREFERENCE

1. Motorola Satellite Communications, Inc. ("Motorola"), by its attorneys, hereby renews its request pursuant to Section 1.402 of the Commission's Rules,[1/] that it be awarded a nationwide pioneer's preference in the above-captioned proceeding.[2/] In this request and in its associated application, Motorola has provide the Commission with all of the information required for obtaining a pioneer's preference, including its plan for implementing the IRIDIUM™ system, the frequencies it proposes to use, the area for which this

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1/ See Establishment of Procedures to Provide a Preference to Applicants Proposing an Allocation for New Services, FCC 91-112, released May 13, 1991. These rules became effective on July 30, 1991.

2/ Motorola initially filed its request for a pioneer's preference in conjunction with its application for the IRIDIUM™ system. See Motorola Application at 7-8 (December 3, 1990). The Commission accepted Motorola's application for filing on April 1, 1991, along with the application of the Ellipsat Corporation for an elliptical orbit satellite system. See Public Notice, Report No. DS-1068 (April 1, 1991). Motorola hereby incorporates by reference those portions of its pending application which bear upon this request for a pioneer's preference.

preference is sought, the feasibility of its technology, and the public interest factors supporting waivers of certain technical rules.

2. The IRIDIUM™ system has been developed by Motorola to provide a global digital mobile personal communications network employing a constellation of seventy-seven low earth orbiting satellites. The system will employ an innovative cellular design and spot beam technology which is somewhat analogous to present day cellular telephones, except in reverse. In the case of cellular telephones, a static set of cells serves a large number of mobil units, whereas IRIDIUM™'s cells will move at about 7,400 meters per second over the Earth while mobile units remain relatively still.

3. Motorola's application requests authority to use the RDSS uplink band only (1610-1626.5 MHz) for the provision of radio determination ("RDSS") and mobile satellite services. No rule changes are requested; however, several waivers of the RDSS rules have been sought to permit Motorola to operate on a bidirectional basis in the RDSS uplink band, to use non-spread spectrum modulation techniques, and to offer both two-way voice and data services on a co-primary basis with radiodetermination services. Motorola has demonstrated in its application that grant of these waivers would not cause objectionable interference to other users in the band, would allow for other compliant RDSS systems to operate in the band, and would otherwise be in the public interest.

4. Motorola's application also sets forth the technical feasibility of the IRIDIUM™ system. In order to demonstrate further the technical feasibility of its system,

Motorola submitted an experimental application with the Commission on April 15, 1991. The Commission granted this experimental authorization on May 15, 1991.[3/] Motorola anticipates filing additional requests for experimental authorizations in the coming months to support its research, development and testing efforts on the IRIDIUM™ system.

5. The geographic area for which a preference is sought is the entire United States, including all of its possessions and territories. The IRIDIUM™ system will, by its nature as a global system, cover the entire nation, with spot beam antennae placing multiple footprints over all rural and urban parts of the country. All RDSS systems are, by their nature, nationwide systems. The preference area requested is no broader than what would be necessary and appropriate for any system licensed in the RDSS band. The uniqueness of the IRIDIUM™ system is not its broader coverage area, but its spectral efficiency and innovative design, including the use of intersatellite links and bidirectional capabilities. The requested pioneer's preference, therefore, should apply to the nationwide service area specified in Motorola's RDSS application.

6. The IRIDIUM™ system application requests use of existing RDSS spectrum under the current RDSS rules, albeit in a technologically innovative fashion. Motorola has not requested any amendments to the frequency allocation or RDSS rules; nor has it petitioned the Commission to institute a rulemaking proceeding

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3/ Copies of the experimental application and authorization are included in Exhibit I hereto.

before acting on the IRIDIUM™ application.[4/] The IRIDIUM™ system is exactly the type of new and innovative system which was envisioned by the Commission in its pioneer's preference proceeding. Accordingly, the Commission should proceed to issue a pioneer's preference to Motorola without initiating a rulemaking proceeding.

7. Because no rules need be changed or modified in order to grant the IRIDIUM™ application, Motorola should not be required to file a rulemaking petition in order to be considered for the instant preference request.[5/] Significant improvements in spectrum utilization, such as bidirectional use of scarce L-band spectrum, are possible without a wholesale rule change. It would be counterproductive to the Commission's intention to reward innovation through early preferences by instead requiring a rulemaking proceeding which in all likelihood would delay implementation of such innovations.

8. This interpretation of the pioneer's preference rules is consistent with the Commission's stated objectives:[6/]

4/ Other parties, however, recently have petitioned the Commission to reallocate the RDSS spectrum and modify the RDSS rules. See Petition filed by TRW, Inc. (July 8, 1991); Petition filed by AMSC (June 3, 1991); Petition filed by Constellation Communications, Inc. (June 3, 1991). None of these petitions has been placed on public notice.

5/ Of course, to the extent that the Commission later chooses to conduct a rulemaking on its own motion or in response to a petition submitted by another party which impacts on the IRIDIUM™ application, Motorola will be an active participant in the proceeding. Motorola does not interpret, however, the Commission's pioneer's preference rules as requiring, at the outset, that a separate petition for rulemaking be filed by Motorola, solely for the purpose of preserving its right to request a pioneer's preference for the IRIDIUM™ system.

6/ See Establishment of Procedures to Provide a Preference to Applicants Proposing an Allocation for New Services, FCC 91-112, at ¶ 37.

> We are persuaded that both a new radio service and a new technology used to improve an existing service by significantly improving spectrum efficiency should be considered for a preference. In addition, proposals that promise to enable the sharing, or co-use, of allocated spectrum may qualify.

The IRIDIUM™ system will accomplish these objectives without the necessity for a time-consuming rulemaking proceeding: (1) by improving an existing service ("RDSS") through significant enhancements to spectrum efficiency; and (2) by enabling the sharing, or co-use, of allocated RDSS spectrum with other compliant RDSS systems.

9. The public interest considerations supporting Motorola's IRIDIUM™ application equally justify the requested pioneer's preference. See Motorola Application at 10-19. The IRIDIUM™ system offers numerous benefits to the public, including: (1) continuous, global coverage to virtually all points on the Earth; (2) multiple frequency reuse of the scarce frequency spectrum; (3) the freeing up of the RDSS downlink band for other uses; (4) unparalleled flexibility and innovations in technical design; (5) helping to ensure the safety of life and property by extending the public health benefits of the telephone to the outdoors; and (6) the establishment of U.S. leadership in mobile, personal and satellite communications.

CONCLUSION

10. The IRIDIUM™ system's highly innovative low earth orbiting satellite design is a superior candidate for providing radiodetermination and mobile satellite services in the existing RDSS bands. As the developer of this system, Motorola deserves a

preference for the pioneering aspects of IRIDIUM™. This preference should be awarded to Motorola without conducting a time-consuming rulemaking proceeding.

11. For the foregoing reasons, the Commission should promptly grant to Motorola a nationwide pioneer's preference for its IRIDIUM™ system.

Respectfully submitted,

MOTOROLA SATELLITE
COMMUNICATIONS, INC.

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July 30, 1991

EXHIBITS

MOTOROLA INC.
April 15, 1991

Mr. Frank Wright
Chief, Frequency Liaison Branch
Office of Engineering and Technology
Federal Communications Commission
2025 M Street, N.W., Room 7322
Washington, DC 20554

Dear Mr. Wright:

Pursuant to Section 5.202(e) of the rules, Motorola, Inc. requests an experimental special temporary authorization (STA) to conduct propogation tests beginning May 15, 1991 for a period of 6 months using an airborne transmitter under the parameters listed below. Tests are planned at a variety of locations to assess the propogation characteristics of different terrain situations. While we request nationwide operation for administrative convenience, the tests will be conducted primarily in various locations throughout Texas, Arizona, Colorado, and Illinois. In any given area, testing will be conducted for approximately a two-week period. The maximum height of the airborne transmitter will be 10,000 feet. The specific parameters requested for the STA are:

Center Frequency:	1600.0 MHz
Emission:	50M0F1D
Max Power:	10 Watt EIRP
Location:	Contiguous U. S.

In Docket No. 79-144 the Commission categorically excluded certain regularly licensed mobile systems from routine environmental processing concerning radio frequency (RF) radiation. While experimental actions were not categorically excluded, the facilities requested in the application are of a similar nature and should not exceed the ANSI standard used by the Commission for public exposure to RF radiation.

Please call me at (202) 371-6940 if you have any questions or when the STA is ready for pickup. I appreciate your assistance in expeditiously processing this request.

Regards,

Stuart E. Overby
Manager of Technical Programs
Government Relations Office

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